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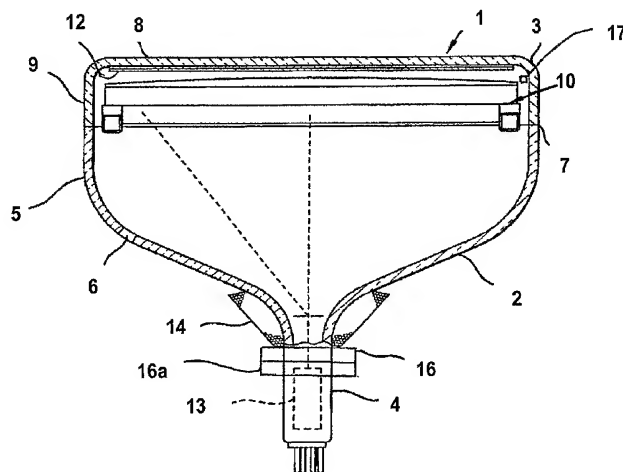
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(54) Title: MAGNETIC FIELD COMPENSATION APPARATUS FOR CATHODE RAY TUBE



(57) **Abstract:** A cathode ray tube (CRT) (1) having a glass envelope (2) is disclosed. The glass envelope is formed of a rectangular faceplate panel (3) and a tubular neck (4) connected thereto by a funnel (5). An electron gun (13) is positioned in the neck for directing electron beams toward the faceplate panel. A yoke (14) is positioned in the neighborhood of the funnel-to-neck junction. The yoke has windings configured to apply a horizontal deflection yoke field and a vertical deflection yoke field to the beams. At least one magnetic field sensor (17) is located near the glass envelope for sensing an ambient magnetic field environment of the CRT. A controller receives a signal from the magnetic field sensor. Register correction coils are mounted in the vicinity of the neck and are dynamically controlled by the controller to shift the beams. Quadrupole coils (16) are applied to the neck and have adjacent poles of alternating polarity such that the resultant magnetic field being dynamically controlled by the controller based on the magnetic field sensor signal moves outer ones of the beams to correct the misconvergence caused by the register correction.

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